

The Night Sky

Key Words: constellations, intensity, orbit, patterns, planets, planisphere, revolve, rotate, satellites, space craft, space shuttle, space station, space probe, stars, telescopes

Desired Outcomes

Goals:

S4E1. Students will compare and contrast the physical attributes of stars, star patterns, and planets.

- a. Recognize the physical attributes of stars in the night sky, such as number, size, color, and patterns.
- b. Compare the similarities and differences of planets to the stars in appearance, position, and number in the night sky.
- c. Explain why the pattern of stars in a constellation stays the same, but a planet can be seen in different locations at different times.
- d. Identify how technology is used to observe distant objects in the sky.

S4CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

- a. Keep records of investigations and observations and do not alter the records later.
- b. Carefully distinguish observations from ideas and speculation about those observations.

S4CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

- a. Add, subtract, multiply, and divide whole numbers mentally, on paper, and with a calculator.
- b. Use fractions and decimals—halves, thirds, fourths, fifths, tenths, and hundredths--in scientific calculations.

S4CS3. Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities utilizing safe laboratory procedures.

- a. Choose appropriate common materials for making simple mechanical constructions

- and repairing things.
- c. Use computers, cameras, and recording devices for capturing information.

S4CS4. Students will use ideas of system, model, change, and scale in exploring scientific and technological matters.

- b. Use geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories to represent corresponding features of objects, events, and processes in the real world. Identify ways in which the representations do not match their original counterparts.
- c. Identify patterns of change in things—such as steady, repetitive, or irregular change—using records, tables, or graphs of measurements where appropriate.

S4CS5. Students will communicate scientific ideas and activities clearly.

- b. Make sketches to aid in explaining scientific procedures or ideas.
- c. Use numerical data in describing and comparing objects and events.
- d. Locate scientific information in reference books, back issues of newspapers and magazines, CD-ROMs, and computer databases.

S4CS8. Students will understand important features of the process of scientific inquiry.

Students will apply the following to inquiry learning practices:

- c. Scientists use technology to increase their power to observe things and to measure and compare things accurately.

Enduring Understandings:

Students will understand that...

- stars and planets are very different;
- there are many more stars than planets;
- the sun is a star; the earth is a planet;
- stars appear in recognizable patterns (constellations) which stay the same;
- stars do not move, although they appear to move across the sky nightly, and different stars can be seen in different seasons;
- planets move in orbits around the sun and can be seen in different locations in the sky; and
- scientists have equipment such as telescopes and space probes which

Essential Questions:

- Why do stars shine?
- How do we know what stars are made of?
- Why are some stars brighter than others?
- Has anyone counted the stars?
- How can we tell a planet from a star in the night sky (since they also shine)?
- How close can we get to a star?
- Why does our sun look so much bigger than other stars?
- Why is it helpful to be able to recognize constellations in the sky?
- What are planets made of?
- How can people see distant objects

enable them to see and study distant objects in the sky.	in space?
<p>Students will know . . .</p> <ul style="list-style-type: none"> • key words; • the physical attributes of stars in the night sky; • how stars differ from planets; • the significance of the colors of stars (blue, white, yellow, red); • how constellations were named; • why star patterns stay the same; • how identifying star patterns can be helpful to us; • how planets move around the sun and change locations in the sky; and • what kinds of equipment and technology scientists use to study objects in space. 	<p>Students will be able to...</p> <ul style="list-style-type: none"> • explain how stars and planets differ in size, appearance, position, and number; • explain or demonstrate how the distance between a viewer and an object affects its perceived size; • compare our Sun to other stars; • explain or demonstrate why stars appear to move in the sky; • describe or demonstrate the movement of planets; and • name and describe some ways that scientists can see and study distant objects in space.
<p>Lesson Hook:</p> <p>Stars or Planets?</p> <ul style="list-style-type: none"> • Before class, poke lots of small holes in a piece of black construction paper and place it on the overhead projector to simulate objects in the night sky. • Before class, make a transparency of <u>Activity Sheet # 1B</u> (the compare and contrast diagram/graphic organizer). • Turn the lights off in the room and turn on the projector to show the “stars”. Ask students, “How can we tell a star from a planet in the night sky?” • Record students’ responses on the chalkboard. • Then remove the black paper from the projector and place the transparency of the compare/contrast diagram on the projector. Tell students that this diagram may provide them with some help in distinguishing stars from planets. • Provide students with a copy of the reading passage, Stars or Planets? (<u>Activity Sheet # 1A</u>). Give them a few moments to study the passage. • Then ask students for information that should be placed on the diagram. As they give you the information they have found in the passage, write it on the transparency. 	

Assessment

Performance Tasks:

- To have students demonstrate understanding of the concept of relative size, have them create a lesson which will demonstrate to a younger child why the moon and the sun appear to be about the same size to us.
- Have students create poems, raps, or songs which teach the ways stars and planets are alike and different.
- **G.R.A.S.P.S. Performance Task Sheet # 1** My Neighbor's Eyes
- **G.R.A.S.P.S. Performance Task Sheet # 2** Equip A New Observatory
- Make Your Own Planetarium See **Performance Task Sheet # 3.**

Other Evidence:

- Have students create a Venn diagram to compare and contrast a star and a planet.
- Give students a copy of the compare/contrast diagram, Stars or Planets? (Activity Sheet # 1 B) which was used earlier in the Hook activity. Have them write in the ways that stars and planets are alike and different.
- Science Journal: Explain in your science journal why the sky umbrella and globe used in Learning Activity # 11 (Star Movement) are a good model for demonstrating that stars don't move; they just appear to move.

Plan of Action

Learning Activities:

1. Activity: Investigate relative size. "Why does our Sun look so much bigger than other stars in the sky?" Place two students in the hallway (or on the playground) side by side. One should hold a basketball, and one should hold a beach ball. The two balls will simulate two sizes of stars--medium and large. Ask which ball they think is the Sun? They will probably guess the largest (beach ball). Explain that our Sun

is only a medium sized star. It will be the basketball. Tell the student holding the beach ball to move backwards until the basketball appears much larger than the beach ball. Now our Sun (basketball) looks bigger than the large star (beach ball). Explain that our Sun looks bigger than other stars because it is much closer to us.

2. Activity: Investigate star colors. Ask students if they know what stars are made of. They are balls of hot glowing gases. Stars range in color from red to bluish white. To the naked eye, stars don't look like they have much color, but you can detect these differences with a telescope. These colors correspond to the temperatures of the stars. Explain that the colors signify the intensity of heat. Blue is hottest, white is hotter than red, and red is cooler. Our sun is a medium-sized star and yellow in color. Have students study the flame of a candle, observing the blue, yellow, white, and red colors in the flame. Ask students if they have noticed these color variations when they have stared at a fire in a fireplace at home.
3. How many stars and planets are there? Scientists are not sure either, but are investigating this question. We can guess that planets revolve around at least a few of these stars, perhaps there are a few billion planets in all. Do you suppose that on some of these planets there are forms of intelligent life that may have telescopes and spaceships? Have students research ways that scientists are trying to find out if there is life on other planets (studying the chemicals on other planets, listening for radio signals, sending radio messages and hoping for a reply). Visit www.nasa.gov.
4. Introduce constellations. Ask the students what they know about constellations. Have they heard of The Big Dipper? Ancient people called it Ursa Major, the Big Bear. Explain that constellations are patterns of prominent stars in the sky that seem to some people to be in the shapes of pictures. Many constellations were named after characters or objects taken from ancient Greek myths. 88 constellations have been named.
Activity Sheet # 2: The Big Dipper
Have students read the selection about the Big Dipper, then use other sources of reference to complete the chart.

5. Activity: Demonstrate distance between stars. From Earth, the stars in a constellation look close to one another. In reality, they are extremely far apart. You can demonstrate this by cutting out seven paper stars about the size of a human hand. Select seven students to hold the stars. Take the class to the playground. Have the seven students place themselves across the playground in the shape of the Big Dipper. Make sure the other students can see the shape of the dipper. Ask the students whether all stars are the same distance from Earth. They should answer "No". Have the students holding the stars move to different distances from the observers. Have some move closer and some move farther away, but continue holding their stars in the same relationship to one another. They will no longer be standing next to each other, but the shape of the dipper will still look the same from the observers' viewpoint. Now have the observers move off to the side of those holding the stars. From the new viewpoint, the shape of the dipper will disappear.

Help your learners to see that star patterns are dependent on the angle of view. From anywhere else in space, there would be no Big Dipper.

6. **Home Activity:** Activity Sheet # 3: Find the North Star. Polaris, also called the North Star, can always be seen in the northern sky. Send Activity Sheet # 3 home with students so that they may learn how to find it.
7. Activity: Research and Writing (research a constellation)
Give each student a copy of Activity Sheet # 4. Assign each student one of the constellations to research to discover how it got its name. Have them write a paragraph telling what they have found.
8. Activity: Make a Constellation (3 methods)
Provide instructions and materials for students to choose from several methods to make a model constellation.

Dixie Cup Constellations

Materials: (per student)

12 ounce paper cup

one straight pin or a small finishing nail (nail works better)

circular constellation patterns

flashlight

Procedure:

- Make copies of constellation patterns or let students draw their own inside a circle the size of the bottom of a paper cup. Have students cut out the circular pattern.
- The students should place the pattern on the outside bottom of the paper cup.
- The students should use a straight pin (or nail) to puncture each star in the constellation. Make sure the pin goes through the pattern and the bottom of the cup. Remove the pattern from the cup.
- Place a flashlight inside the cup. Angle the flashlight so the light beam is directed toward the side of the cup and not towards the bottom. Darken the room and have students project their constellations on the wall or ceiling.

Glow in the Dark Constellations

Materials: (for each student)

small black paper plate or a half sheet of black construction paper

Elmer's glue

white chalk or white crayons

glow in the dark beads, 8-10 (You can find them at Michael's craft stores.)

constellation patterns

Procedure:

- Choose a constellation pattern or draw your own.
- Looking at your pattern and using chalk or a white crayon, draw your constellation on the plate or black paper. Your drawing may be larger than the

- one on the pattern. Make sure the dots (stars) are easily seen.
- Place beads of glue on the black plate (or paper) to match the placement of dots (stars) on the pattern.
- Place glow in the dark beads in the glue on top of each dot in your drawing.
- When the glue has dried enough to move your drawing, turn off the lights or take your constellation into a dark room. See your constellation glow.

Film Canister Constellations

Materials:

scissors
empty 35mm film containers
clear tape
pencil
piece of thick cardboard
thick sewing needle or small nail
1 ½ inch nail
safety goggles

Procedure:

- Draw a constellation pattern inside a circle the size of the canister lid. Make dots where the stars should be.
- Make a label with the name of your constellation on a piece of masking tape.
- Tape the label onto the side of a film canister.
- Take off the lid. Now cut out your circular pattern and fit it inside the lid. (The eraser end of a pencil may help smooth the disk so it's flat.)
- Place the cardboard on a flat surface. Place the lid, disk-side up, on the cardboard. Use the sewing needle or small finishing nail to CAREFULLY poke holes where the dots are. The cardboard will protect your desktop.
- Take the pattern disk out of the lid. Make sure the holes went all the way through by holding it up to the light. Does light show through?
- Turn the film canister upside down. Wearing goggles, use the hammer and large nail to poke a hole in the bottom. The hole should be just big enough to fit an unsharpened pencil in it.
- Put the lid on the canister. Hold it up to the light and look through the bottom hole. What do you see?

9. Activity: Literature/Social Studies/Creative Writing connection

During the 1800's, many slaves managed to escape to the North by following the constellation known as the Big Dipper. They called this constellation "the drinking gourd". Read the book, **Follow the Drinking Gourd**. Then ask students to write an original story in which one of the characters has an adventure or solves a mystery with the help of one of the constellations.

10. Activity: Creative Writing Create a New Constellation

Ancient Greeks aren't the only ones who saw star pictures in the sky. Native Americans have also created stories about the stars. Read the Native American

folktale, **How the Morning and Evening Stars Came to Be**. Give students Activity Sheet # 5. They will create a new constellation and write a myth about it.

11. Activity: Star Movement (demonstration of apparent motion with sky umbrella)
Ask the students, “Do the stars move? (No.) “Why can the constellations be seen in different locations at different times of the night?” The stars seem to drift across the sky at night because the Earth is turning on its axis. During each 24-hour period, the part of the Earth you are on turns so that you are facing different parts of space. You can demonstrate this by making a model of the sky on the underside of an umbrella. Stick some glow-in-the-dark stars on the underside of an umbrella to form a few well known constellations. Place a sticky dot on a globe where Georgia is located to show where we are standing as we view the night sky. Have one student hold the globe and turn it slowly to simulate the Earth’s rotation on its axis. Have another student hold the umbrella stationary over the globe. Help students observe that the dot on the globe faces different parts of the sky (umbrella) as the globe turns. Ask the students, “Why is it important that we keep the umbrella still while the globe turns?” (Stars do not move; only the Earth is moving.)
12. **Home Activity:** Ask student to try this experiment to show how a star seems to drift across the sky at night. Pick out a bright star and stand somewhere so that it lines up with an immobile landmark, such as a tree. Note the time and return to the same spot an hour later. You will find that the star has moved to the west of the landmark. If you look at the same star over the next few days, you will find that it will line up with your landmark four minutes earlier each night.
13. Activity: Constellation Cycles (AIMS Magazine, November 2004)
“Why can we see some constellations only in winter and others only in summer?” This happens because Earth orbits the Sun during the year. During its orbit, the dark side of Earth faces out towards different parts of space, so we get a changing view of different stars over the months. Help your students track the movement of stars year-round using a sky wheel, or planisphere. Instructions are provided in the AIMS activity, **Constellation Cycles**. The planisphere will also allow students to find which constellations are visible in their area for a given date and time.
14. **Home Activity:** Look for these constellations that are visible in the northern hemisphere in certain seasons of the year.
Look for **Leo** in spring.
When: April 10:30 to 12:00
May 9:00 to 11:00
June 9:00 to 10:00
Where: Look southwest.

Look for the **Little and Big Dippers** in summer.
When: July 10:00 to 12:00
August 9:00 to 10:30
September 7:00 to 9:00

Where: Look north-northwest.

Look for **Cassiopeia and Pegasus** in autumn.

When: October 9:00 to 11:00

November 7:00 to 9:00

December 6:00 to 7:00

Where: Look south.

Look for **Orion** in winter.

When: January 8:30 to 11:30

February 7:00 to 9:30

March 7:00 to 8:00

Where: Look south.

15. Activity: Research and Writing about Space Exploration

“How do scientists study distant objects in space?” Assign groups of students to research the following types of space exploration and present their findings to the class.

- a. telescopes (radio telescopes, optical telescopes, Hubble space telescope)
- b. space probes
- c. satellites
- d. space stations (Skylab and Mir)
- e. unmanned space missions
- f. crewed space missions (space shuttles)

16. **Home Activity:** Spotting Planets

When the weather is clear, ask students to look for planets in the sky (if possible, with the aid of a telescope or binoculars). To find the exact locations of the planets on particular date in your area, clip a star chart from a local newspaper. Star charts often appear on the same page as a weather map. Newspapers that publish the rising and setting times of the sun and moon may also publish the rising and setting times of Mars, Venus, Jupiter, and Saturn. Share these tips for successful planet viewing:

Mercury: This planet is best viewed above a clear horizon. In the spring, look soon after sunset; in the fall, look before sunrise.

Venus: Like Mercury, Venus rises and sets with the sun, but it is much brighter than Mercury and easier to see. Look for Venus around sunset or sunrise.

Mars: This planet is the only object in the sky that is red and does not twinkle. It is generally highest in the sky in fall and winter months.

Jupiter: Look for Jupiter around sunrise and sunset. Its moons may be visible through a telescope.

Saturn: This is the farthest planet that can be seen with the eyes alone. Look for the rings with a telescope.

Uranus, Neptune, Pluto: These planets can only be viewed through a powerful telescope.

Additional Resources:

- Apparent Sizes. (November, 1996). *AIMS Education Foundation Magazine*
- Constellation Cycles. (November, 2004). *AIMS Education Foundation Magazine*
- Lunar Looking. (November, 2002). *AIMS Education Foundation Magazine*
- *Out of This World* (1991). Fresno, CA: AIMS Education Foundation
- Berger, Gilda (1999). *Planets Mini-Unit*. New York: Newbridge Educational Publishing
- Carson, Mary Kay (1996). *Space (1996)*. New York: Scholastic
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- Schlicting, S. and Blackmer, M. (1989). *Super Science Sourcebook*. Idea Factory, Inc.
- Stark, Rebecca. *Our Solar System*. Educational Impressions, Inc.
- Tolman, Marvin (1995). *Hands-on Earth Science Activities*. New York: Parker Publishing Co.
- Winters, Jeanette. (1992). *Follow the Drinking Gourd*. Dragonfly Books.
- Van Cleave, Janice (1991). *Astronomy for Every Kid*. New York: John Wiley & Son
- Vriesenga, Daryl (1991). *Our Solar System*. Grand Rapids: Instructional Fair
- Young, Ruth M. (1996). *A Science/Literature Unit written for The Magic School Bus Lost in the Solar System*. Huntington Beach: Teacher Created Materials
- Georgia Performance Standards: www.georgiastandards.org
- NSTA: www.scilinks.org
- NSTA journal, *Science & Children*
- NASA Educators Resource Center, located at the state headquarters of GYSTC at Chattahoochee Technical College in Marietta.
- NASA : www.nasa.gov

Video Clips: www.unitedstreaming.com

Name: _____ Class: _____ Date: _____

The Night Sky
Performance Task # 1 (G.R.A.S.P.S)
My Neighbor's Eyes

Goal:

Your goal is to convince a neighbor that it is very unlikely that he has discovered a new planet in the sky.

Role:

You are an astronomer working for NASA. You have been studying the stars and planets in the night sky with and without telescopes for twenty years.

Audience:

Your neighbor who lives down the street likes to lie on his roof at night and view the stars.

Situation: Your neighbor watches the sky at night from his roof. He does not use any special viewing equipment, just his eyes. He tells you that he has discovered a new planet in the sky.

Product: Create a list of questions you would ask him to see if he is seeing a planet or a star in the sky.

Standards: You will be successful if your questions lead your neighbor to realize that what he is seeing cannot possibly be a planet, but is a star.

Name: _____ Class: _____ Date: _____

The Night Sky
Performance Task # 2 (G.R.A.S.P.S)
Equipping a New Observatory

Goal:

Your task is to equip a new observatory.

Role:

You work for a company that builds telescopes and other equipment needed observatories.

Audience:

The builders of the observatory need to know what kind of telescopes they will be installing—optical telescopes or radio telescopes.

Situation: The observatory will be located in an area of low elevation surrounded by large cities.

Product: You must write a report or prepare a presentation that explains to the builders which type of telescope must be installed in this location.

Standards: You must defend your choice of telescope by explaining how each kind of telescope works and then explaining why the one you chose is the best choice for this new observatory.

Name: _____ Class: _____ Date: _____

The Night Sky
Performance Task # 3
Make Your Own Planetarium

Background Information:

Early attempts to make models of the night sky date back to ancient Greece, but modern planetariums were first developed in the 1920's. Many museums (and some universities and other educational institutions) have specially designed rooms where an exciting show about the stars and planets is staged. When the theater grows dark, and the music begins, you almost feel like you're traveling to worlds beyond our own.

Directions:

Create your own planetarium with an empty oatmeal box (cut off the bottom, too) and a length of paper punched with holes in the shapes of constellations. Feed the paper through two slits made at one end of the box, and place a flashlight inside the box. In a dark room, the "stars" will show up wherever you point the box.

Name: _____ Class: _____ Date: _____

The Night Sky

Activity Sheet # 1 A: Stars or Planets?

Directions:

Study the information in the paragraphs below. Your teacher will provide an overhead transparency with a diagram which will lead you to compare and contrast stars and planets. Look for information which will help your class to complete the compare and contrast diagram and will help you to tell stars and planets apart in the night sky. Underline or highlight information you think should be included on the diagram.

How can we tell stars from planets in the night sky?

When you look at the night sky, you see many tiny lights. If you watched night after night you would see that most of these tiny lights, that we call stars, always make the same shapes in the sky, like the Big Dipper. There are a few shiny objects that seem to move among the stars. These wandering objects are planets.

Both planets and stars are very far away from us; but the planets in our solar system are much closer to us than all of the stars, except for the star which we call the Sun. Planets are smaller than stars and circle around the Sun. That's why the planets seem to move among the stars. Astronomers believe that many stars have planets circling around them, just as the Sun does. The Sun is an average-sized star. This means that some stars are larger than the Sun; some are smaller, and many are the same size.

To the naked eye, planets look like stars in the night sky. They are reflecting light from the sun. If you look more closely at planets with a telescope, you will see that they are disks. If you look closely at stars with a telescope, they will look brighter. You will not see a clearly defined disk shape. Usually when you look directly at a star, it twinkles. A planet doesn't. That's because stars are much farther away than planets. Light from distant stars is usually not as steady as light from nearer planets. If you don't see any twinkling at first, cover one eye or look at the star from a different angle. If you see twinkling, then you're looking at a star.

Name: _____ Class: _____ Date: _____

The Night Sky
Activity Sheet # 1 B: Stars or Planets?

STARS

PLANETS

HOW ALIKE?

HOW DIFFERENT?

With regard to...

LOCATION

**DISTANCE
FROM EARTH**

SIZE

MOTION

Name: _____ Class: _____ Date: _____

The Night Sky
Activity Sheet # 1 B: Stars or Planets?

STARS

PLANETS

HOW ALIKE?

Both shine in the sky at night.

Both look like tiny lights.

Both are a long way from Earth.

HOW DIFFERENT?

With regard to...

LOCATION

Stars stay the same distance apart.

Stars are very far from Earth.

Many are the same size as the sun.

Stars always make the same shapes in the sky.

**DISTANCE
FROM EARTH**

SIZE

MOTION

Planets move around.

Planets are not as far from the Earth as stars.

Planets are much smaller than stars.

Planets move around the sun.

Name: _____ Class: _____ Date: _____

The Night Sky

Activity Sheet # 2: The Big Dipper

Directions: Read the information below. Then use reference sources to learn more about the Big Dipper and Ursa Major. Use the information to complete the chart.

The constellation Ursa Major, or the Great Bear contains a group of stars that is well known to many. This group of stars is known as the Big Dipper. The handle of the Dipper is found in the Great Bear's tail. The Dipper's cup is the Bear's flank.

The Native Americans have created an interesting legend for the Big Dipper. They say that the cup of the Big Dipper is a giant bear and the stars that make up the handle are three warriors chasing the bear. Although the Big Dipper is the most familiar constellation in the northern sky, it can only be seen in very dark skies.

Name of Constellation that contains the Big Dipper	How the Constellation Got Its Name	Facts About the Big Dipper

Name: _____ Class: _____ Date: _____

The Night Sky

Activity Sheet # 3: Find the North Star

Background Information:

While stargazing is a year-round activity, winter is the most ideal time of the year to be looking skyward. It still gets dark early, and the stars appear very bright during the winter months.

Some stars are only visible at certain times of the year; but one remains constant, and that is Polaris, or the North Star. (It is also known as the “lodestar” as it’s used in navigation; the Navajo Indians call it The Star That Does Not Move.) Due to the fact that the Earth spins on its axis, the North Star is always pointing in the same direction. Polaris is called the North Star because it is located almost directly above the North Pole. For years, people have used the North Star and other constellations to navigate.

Most star charts have you face north, which you will be doing if you face Polaris. Look for the Little Dipper—Polaris is the last star in its handle. From there, look for the Big Dipper, or Drinking Gourd.

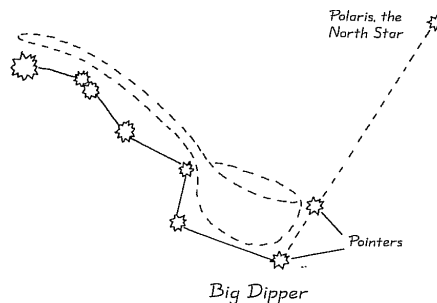
Procedure:

Note: This activity should be done outdoors on a clear night. If possible, use a star chart. When using the star chart, cover your flashlight with red cellophane, so your eyes will stay adjusted to the low light. Stargazing is best done lying down. Try to choose a spot away from distracting lights, and remember the moon (especially when full) obscures many stars with its light.

Materials:

directional compass flashlight red cellophane paper star chart (optional)

1. Lay the compass flat on your hand, allowing the needle to spin freely. When the needle stops, it will be pointing north. Look in that direction at the sky.
2. Locate the constellation, the Big Dipper, in the northern part of the sky. The Big Dipper is a constellation of seven stars that looks like a ladle. Three stars make the curved handle and four stars make the corner of the ladle’s bowl. The star next to the end of the Big Dipper’s handle is actually two stars.
3. Find the two stars on the outer end of the Big Dipper’s bowl. Follow these two stars, called the Pointers, up directly to a star of average brightness. This is Polaris, the North Star.



Name: _____ Class: _____ Date: _____

The Night Sky
Activity Sheet # 4: Research a Constellation

Directions: Your teacher will assign you one of the well known constellations listed below to research. Draw your constellation in the box. Then write a paragraph telling how the constellation got its name.

Constellations for Research <ol style="list-style-type: none">1. Leo2. Pisces3. Gemini4. Libra5. Orion6. Sagittarius7. Cygnus8. Pegasus9. Capricorn10. Draco11. Ursa Major12. Ursa Minor13. Hercules14. Libra15. Cassiopeia16. Cancer	
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Tell what the name of your constellation means and how it got its name.

Name: _____ Class: _____ Date: _____

The Night Sky

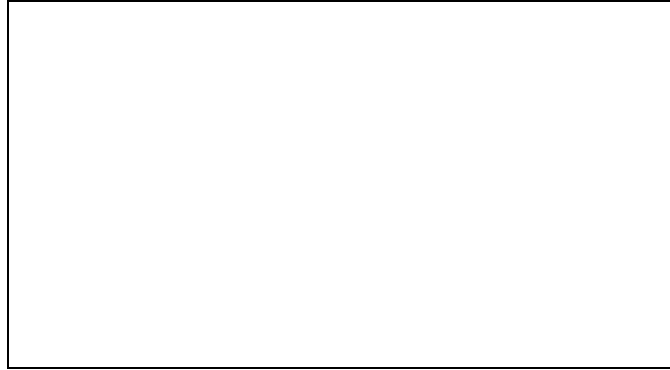
Activity Sheet # 5: Create a Constellation

For many years, stargazers have created pictures by connecting the stars with imaginary lines. Most of the pictures were centered on legends about the gods. There were also pictures based on mythology. As the years have passed, different groups of people have viewed the same group of stars. They named the star pictures constellations. They continued to study the pictures in the sky. As different groups of people studied the same constellation, they gave the constellation different names. With these different names, they assigned different stories or myths.

Your task is to become a stargazer. Imagine that you are outside at night viewing the constellations in the night sky. You are amazed because suddenly you see a constellation that has never been identified. You quickly reach for your notepad and sketch the new constellation. Then you create a story about your new constellation.

Directions: Draw your new constellation. Create a name for your constellation and write a story about it.

My New Constellation, _____



The Legend of a New Constellation
